

#### ABSTRACT OF THE DISCLOSURE

A method for determining the temperature distribution throughout the thickness of a preform used in a container reheat stretch blow molding process by measuring the outside surface temperature of a preform or series of preforms at least two times during the period the preform is cooling down after exiting the heat station and before entering the blow molding station in the blow molding machine and calculating the temperature distribution throughout the thickness of the preform based upon the measured outside surface temperatures using a novel algorithm.